

WEIGHTING METHODS AND APPARATUS USING
MULTIPLE TILTED RECONSTRUCTION PLANES

ABSTRACT OF THE DISCLOSURE

A method for Computed Tomography scanners using multiple tilted reconstruction planes includes view weighting data in accordance with

$$\chi(\beta, \gamma) = \begin{cases} w_b & 0 \leq \beta \leq 2\gamma_m - 2\gamma \\ 1 & 2\gamma_m - 2\gamma < \beta \leq \pi - 2\gamma \\ w_t & \pi - 2\gamma < \beta \leq \pi + 2\gamma_m \end{cases} \quad \omega(\beta, \gamma) = 3\chi^2(\beta, \gamma) - 2\chi^3(\beta, \gamma) \text{ where } \beta$$

is a central view angle, γ is a fan angle, γ_m is a maximum half fan angle of an x-ray beam, and w_b and w_t are each weights no greater than 1.